

Notice of Allowability

Application No.

10/059,162

Examiner

Kara E Geisel

Applicant(s)

KUBO ET AL.

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed on 03 December 2003.
2. ☒ The allowed claim(s) is/are 1-16.
3. ☒ The drawings filed on 31 January 2002 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.
5. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
 - (a) ☐ The translation of the foreign language provisional application has been received.
6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No. _____.
 - (b) ☐ including changes required by the proposed drawing correction filed _____, which has been approved by the Examiner.
 - (c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the margin according to 37 CFR 1.121(d).

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1 <input type="checkbox"/> Notice of References Cited (PTO-892) | 5 <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2 <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6 <input checked="" type="checkbox"/> Interview Summary (PTO-413), Paper No. <u>1203</u> |
| 3 <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No. _____ | 7 <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4 <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8 <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9 <input type="checkbox"/> Other |

Examiner-Initiated Interview Summary	Application No. 10/059,162	Applicant(s) KUBO ET AL.	
	Examiner Kara E Geisel	Art Unit 2877	

All Participants:

(1) Kara E Geisel.

(2) Thomas Brown, attorney of record.

Status of Application: _____

(3) _____

(4) _____

Date of Interview: 12 January 2004

Time: _____

Type of Interview:

☒ Telephonic

☐ Video Conference

☐ Personal (Copy given to: ☐ Applicant ☐ Applicant's representative)

Exhibit Shown or Demonstrated: ☐ Yes ☒ No

If Yes, provide a brief description:

Part I.

Rejection(s) discussed:

none

Claims discussed:

1-16

Prior art documents discussed:

none

Part II.

SUBSTANCE OF INTERVIEW DESCRIBING THE GENERAL NATURE OF WHAT WAS DISCUSSED:

discussed a typographical error throughout the claims. See office action.

Part III.

☒ It is not necessary for applicant to provide a separate record of the substance of the interview, since the interview directly resulted in the allowance of the application. The examiner will provide a written summary of the substance of the interview in the Notice of Allowability.

☐ It is not necessary for applicant to provide a separate record of the substance of the interview, since the interview did not result in resolution of all issues. A brief summary by the examiner appears in Part II above.

Kara Geisel
(Examiner/SPE Signature)

(Applicant/Applicant's Representative Signature – if appropriate)

DETAILED ACTION

Examiner's Amendment

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Thomas E. Brown on January 12, 2004.

The application has been amended as follows:

In regards to claims 1, lines 12 and 14, 2, line 2, 3, line 2, 4, line 2, 5, lines 11 and 13, 6, lines 2 and 5, 7, line 2, 8, line 2, and 9-16, line 3, "calorimetric" has been changed to --colorimetric-- in order to correct for an obvious typographical error (see specification, page 6, lines 1-19).

In regards to claim 5, line 12, "a" has been replaced with --by--, and --a-- has been added between "considering change" to correct an obvious typographical error (see claim 1, lines 13-14).

The amended claims appear below:

1. A computer color matching method of paint, being a toning method of determining a blending ratio of colorants and luster color materials conforming to a target color by computation, when color matching a metallic and pearlescent paint composed of plural colorants and luster color materials, said method comprising the steps of:

preliminary measuring the color of a paint, as liquid varied in a volume formulation ratio of usable colorants, and luster color materials as a spectral reflectance by a paint color measuring means;

storing the preliminary measured data in a memory of a computer;

adjusting a color of each one of two or more paints in the blending ratio for realizing a target color which is measured by the paint color measuring means when color matching a metallic and pearlescent paint without preparing painted panels;

predicting and computing a ~~calorimetric~~ colorimetric value of reproduced color by using the measured data and the preliminary measured data by considering a change in the a ~~calorimetric~~ colorimetric value due to differences in the blending ratio of colorants and luster color materials; and determining an appropriate blending ratio of colorants and luster color materials by computation.

2. The computer color matching method of paint of claim 1, wherein data of ~~calorimetric~~ colorimetric values and blending ratio of paint composed of plural colorants and luster color materials in metallic and pearlescent paint is stored in the computer memory when predicting and computing the reproduced color by using a spectral reflectance measured in the method claim 1, and a difference from the colorimetric value predicted by the computing method in claim 1 is adjusted, and fuzzy inference is employed in a means for enhancing the color matching precision.

3. The computer color matching method of paint of claim 1, wherein a ~~calorimetric~~ colorimetric means of paint supplies the paint continuously to a measuring position, and an illumination light is emitted and reflected to the paint supplied in the position, and the reflected light is examined by spectral analysis.

4. The computer color matching method of paint of claim 1, wherein a ~~calorimetric~~ colorimetric means of paint supplies the paint continuously to a measuring position, and an illumination light is emitted and reflected to the paint supplied in the position, and the reflected light is examined by spectral analysis.

5. A computer color matching method of paint, being a color matching method of determining a blending ratio of colorants conforming to a target color by computation, when color matching a solid color paint composed of plural colorants, said method comprising the steps of:

preliminary measuring the color of a paint, as liquid varied in the blending ratio of usable colorants, as a spectral reflectance by a paint color measuring means;

storing the preliminary measured data in a memory of a computer;

adjusting a color of each one of two or more paints in the blending ratio for realizing a target color, which is measured by the paint color measuring means when color matching a solid color paint without preparing painted panels;

predicting and computing a ~~calorimetric~~ colorimetric value of reproduced color by using the measured data and the preliminary measured data and ~~a~~ by considering a change in a ~~calorimetric~~ colorimetric value due to difference in blending ratio of colorants; and

determining an appropriate blending ratio of colorants by computation.

6. The computer color matching method of paint of claim 5, wherein data of ~~calorimetric~~ colorimetric values and blending ratio of paint composed of plural colorants in solid color paint is stored in the computer memory when predicting and computing the reproduced color by using the a spectral reflectance measured in the method of claim 5, and a difference from the ~~calorimetric~~ colorimetric value predicted by the computing method in claim 5 is adjusted, and fuzzy inference is employed in a means for enhancing the color matching precision.

7. The computer color matching method of paint of claim 5, wherein a ~~calorimetric~~ colorimetric means of paint supplies the paint continuously to a measuring position, and an illumination light is emitted and reflected to the paint supplied in the position, and the reflected light is examined by spectral analysis.

8. The computer color matching method of paint of claim 6, wherein a ~~calorimetric~~ colorimetric means of paint supplies the paint continuously to a measuring position, and an illumination light is emitted and reflected to the paint supplied in the positions, and the reflected light is examined by spectral analysis.

9. A preparing method of paint for preparing a paint of a target color by applying the color matching method of claim 1 in a manufacturing process of paint, wherein the computer judges if the

~~ealorimetric~~ colorimetric value is within a preset allowable range or not, and the manufacturing process of the target color paint is managed on the basis of this judgment.

10. The preparing method of paint for preparing a paint of a target color by applying the color matching method of claim 2 in a manufacturing process of paint, wherein the computer judges if the ~~ealorimetric~~ colorimetric value is within a preset allowable range or not, and the manufacturing process of the target color paint is managed on the basis of this judgment.

11. The preparing method of paint for preparing a paint of a target color by applying the color matching method of claim 3 in a manufacturing process of paint, wherein the computer judges if the ~~ealorimetric~~ colorimetric value is within a preset allowable range or not, and the manufacturing process of the target color paint is managed on the basis of this judgment.

12. The preparing method of paint for preparing a paint of a target color by applying the color matching method of claim 4 in a manufacturing process of paint, wherein the computer judges if the ~~ealorimetric~~ colorimetric value is within a preset allowable range or not, and the manufacturing process of the target color paint is managed on the basis of this judgment.

13. The preparing method of paint for preparing a paint of a target color by applying the color matching method of claim 5 in a manufacturing process of paint, wherein the computer judges if the ~~ealorimetric~~ colorimetric value is within a preset allowable range or not, and the manufacturing process of the target color paint is managed on the basis of this judgment.

14. The preparing method of paint for preparing a paint of a target color by applying the color matching method of claim 6 in a manufacturing process of paint, wherein the computer judges if the ~~ealorimetric~~ colorimetric value is within a preset allowable range or not, and the manufacturing process of the target color paint is managed on the basis of this judgment.

15. The preparing method of paint for preparing a paint of a target color by applying the color matching method of claim 7 in a manufacturing process of paint, wherein the computer judges if the

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~~calorimetric~~ colorimetric value is within a preset allowable range or not, and the manufacturing process of the target color paint is managed on the basis of this judgment.

16. The preparing method of paint for preparing a paint of a target color by applying the color matching method of claim 8 in a manufacturing process of paint, wherein the computer judges if the ~~calorimetric~~ colorimetric value is within a preset allowable range or not, and the manufacturing process of the target color paint is managed on the basis of this judgment.

Examiner's Reasons for Allowance

Claims 1-16 are allowed over the prior art of record.

The following is an examiner's statement of reasons for allowance:

As to claim 1, the prior art of record, taken alone or in combination, fails to disclose or render obvious a computer color matching method of paint, being a toning method of determining a blending ratio of colorants and luster color materials conforming to a target color by computation, when color matching a metallic and pearlescent paint composed of plural colorants and luster color materials comprising adjusting a color of each one of two or more paints in the blending ratio for realizing a target color which is measured by a paint color measuring means when color matching a metallic and pearlescent paint without preparing painted panels, predicting and computing a colorimetric value of reproduced color by using measured data and preliminary measured data and by considering a change in a colorimetric value due to differences in the blending ratio of colorants and luster color materials, and determining an appropriate blending ratio of colorants by computation, in combination with the rest of the limitations of claim 1.

As to claim 5, the prior art of record, taken alone or in combination, fails to disclose or render obvious a computer color matching method of paint, being a color matching method of determining a blending ratio of colorants conforming to a target color by computation, when color matching a solid color paint composed of plural colorants comprising adjusting a color of each one of two or more paints

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in the blending ratio for realizing a target color which is measured by a paint color measuring means when color matching a solid color paint without preparing painted panels, predicting and computing a colorimetric value of reproduced color by using measured data and preliminary measured data and by considering a change in a colorimetric value due to differences in the blending ratio of, and determining an appropriate blending ratio of colorants by computation, in combination with the rest of the limitations of claim 5.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kara E Geisel whose telephone number is 571 272 2416. The examiner can normally be reached on Monday through Friday, 8am to 4pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on 571 272 2415. The fax phone numbers for the organization where this application or proceeding is assigned are 703 872 9306 for regular communications and 703 872 9306 for After Final communications. For inquiries of a general nature, the Customer Service fax number is 703 872 9317.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308 1782.

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F.L. Evans
Primary Examiner
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K.G.
KEG
January 12, 2004